CHAPTER 2

Literature Review

This section includes a description of the adolescent depression, the prevalence and incidence, the impact of adolescent depression, the factors associated with adolescent depression, the depression prevention in adolescents, the theoretical perspective approach to depression prevention in adolescents, the adolescent's cognitive psychosocial development and depression prevention, and the conceptual framework.

Adolescent Depression

The range of depression is followed the severity of depressive symptom. The clinical spectrum of adolescent depressive symptoms range from sadness, depressive state, and function disability to depressive disorder or MDD (Bansal, Goyal, & Srivastava, 2009). Sadness is a common feeling when people experience rejection or have suffered a separation or loss. In some individuals this may induce a more severe depressive state due to continuously emotional problems (Harrison, Singer, Rotshtein, Dolan, & Critchley, 2006; Masman, 2010). Depressive state refer to a state of mild depressed mood that can have a negative effect on a person's world view, thoughts, feelings, behavior, activity, and physical well-being. A depressed mood can be viewed as a temporary lowering of mood, whereas depressive disorder is more chronic. Depressive disorder is a change from their usual self for more than two weeks (Masman, 2010). The depressive episode symptom manifests following the classification of mental disorders: DSM-V (American Psychiatric Association, 2013).

Adolescent depression is people aged between 11 to18 years old who have depressive experience or symptoms including feeling depressed, boredom, low self-esteem, social isolative behavior, loss of interest and/or pleasure in previously enjoyed activities, changes in appetite, sleep, psychomotor agitation or retardation, separation anxiety, difficulty with concentration, somatic symptoms which cannot be attributed to

a physical illness, thoughts of death, suicidal ideation, or suicide attempts. Additionally, adolescent depression may be mood-congruent delusion, and/or include auditory hallucinations (Leighton, 2006). These signs are persistent, for most of the day, nearly every day, and continuously for at least two weeks.

In summary, adolescent depression is defined as depressive experience during adolescent transition, which include feeling depressed, boredom, low self-esteem, social isolation, loss of pleasure in previously enjoyed activities, irritable, and changes in appetite, sleep, difficulty with concentration, somatic symptoms, suicidal ideation, or suicide attempts. These signs are persistent, for most of the day, nearly every day, and continuously for at least two weeks.

Prevalence and Incidence of Adolescent Depression

Depression affects approximately 300 million people worldwide; it is one of the most prevalent psychiatric disorders and is a major health problem on a global level (WHO, 2013b). Importantly, depressive disorder in adolescence is common worldwide; the incidence is rise from the early adolescents (Maughan et al., 2013). The prevalence of adolescent depression is high and the present studies found that the prevalence rate of Thai adolescent depression in 2012 ranged from 14% to 19%, which occurred mainly in urban areas (Chaveepojnkamjorn, Pichainarong, Adthasangsri, Sativipawee & Prasertsong, 2016; Trangkasombata & Rujiradarpornb, 2012). While in Northern Thailand the prevalence of depression among adolescents in rural areas is 8% (DiMiceli1, Sherman, Aramrattana, Sirirojn & Celentano, 2016).

The onset of depression often occurs in childhood and adolescence (Maughan, DPhil, & Stringaris, 2013), increases during adolescence between the ages of 11 and 15 (Tak et al., 2012); and sharply the age 15 (Thapar, Collishaw, Pine, &Thapar, 2012). Early onset adolescent depression is associated with recurrent episodes and chronic course of illness (Tak et al., 2012). Almost 50 % of adult depression has their first depressive episode during adolescence (Rohde et al., 2013). The incidence, notably in girls, rises sharply after puberty; the 1 year prevalence rate exceeds 4% (Thapar, Collishaw, Pine, & Thapar, 2012). In Thailand, the Department of Mental Health (DMH, MPH, 2016) points out that the incidences increased during 2010 and 2013,

respectively rated 427.52 and 952.46 per 100,000 of the population respectively. Further, the incidence of adolescent depression is a high rate. There is evidence to suggest that the prevalence of adolescent depression 19% of boys and 17% of girls was found to be depressed (Trangkasombat & Rujiradarporn, 2012). Importantly, the study of depression in adolescence found often recurrent 22.7% of individuals report having two or more episodes of depression during the ages of 16-21 years and reoccurred every five to seven years in 80% (Van Voorhees et al., 2011).

In conclusion, depression is one of the most prevalent psychiatric disorders; the incidence is rise from the early adolescents. Better early prevention should be implemented prior adolescent depression increase and lead further negative impact such as burden, suffering, and suicide.

Impacts of Adolescent Depression

Depression leads to emotional distress, physical dysfunction, inability to carry through usual activities and loss of dignity, among others. It is projected the consequence of disabilities with effects to person's competency, relationships, and diminish quality of life. The review literatures illustrate that adolescent depression is significant and can adversely affected on all individual, family and social level as follows:

Individual Level

The adverse impact on individual include impairment in person's competency, daily functioning, poor school performance, that effect to a human quality of life, and the most extremely impact is suicidal tendencies. Several studies indicated that depression projects the consequence of disability of people includes significant role impairment with effects to person's competency (Bhatia & Bhatia, 2007; Gladstone et al., 2011). Particularly, adolescent with depression can negatively cause start at substantial impacts growth and development. This consequence of depression affects to close relationships or even impaired in daily functioning (Pratt & Brody, 2008). The long term suffer from depression end up with lower educational attainment (Pratt & Brody, 2008; Smith & Smith, 2010). As a result, there will be a reduction in their

competency. Furthermore, adolescent depression also significantly increased higher rates of comorbid disorder, including anxiety disorders, ADHD, conduct disorder and include personality difficulties behavior problems such as inappropriate sexual behaviors (Leighton, 2006). Moreover, the study reported that adolescents who experienced past major depressive episode (MDE) were more likely to have engaged in substance abuse than their counterparts who had not experienced a previous year MDE (Substance Abuse and Mental Health Services Administration [SAMHSA], 2011). These consequents resulted in many problems, increasing in the severity of depressive disorder, and difficulty to treat. At a most extreme level, they are likely to have more severe episodes, and heighten suicide risk (Thapar et al., 2012).

The evidence shown depression is the second rank cause of suicide that people who are depressed are 30 times more likely to kill themselves than people who are not depressed. In Thailand, between 2008 and 2010 the suicide rates of adolescence aged 10-19 showed an increased trend 225, 254, and 265 (per 100,000 populations) respectively (DMH, MPH, 2013). Therefore, depression leads to impairment in adolescent's competency, which affect to the quality of life.

Family Level

Depression is a lifelong vulnerability for people and touches every family who have family member with depression (Leahy, 2010). Depressive symptoms such irritate mood, reckless behavior, lack of pleasure in almost all was not only destroyed adolescent individuals but also affected to the family well-being, loss of family relationships, impact to parents' mental state, and family's taking care burden for the increased cost of medical care expenses. Moreover, adolescent with suicide at high risk affected to their parents' mental state due to worry about taking care for suicidal precaution and feeling of guilt (Smith & Smith, 2010). Therefore, depression is continuously psychological and economic family's burden.

Social Level

The evidence shown depression is not only negative cause disability in the social functioning of patients; the negative consequently outcomes of depression are increasing the high cost of treatments that leads to a socioeconomic burden (WHO, 2008). Especially, the burden of depression is highest in low-income and middle-income countries (Thapar et al., 2012). The studies to determine a long-term effect of depressive symptoms during childhood, children were followed for 40 years (Smith & Smith, 2010). The impact of depression is less individual's ability to concentrate, lower efficiency, and less ability to organize work (Birnbaum, Kessler, Kelley, Ben-Hamadi, Joish, Greenberg, 2010). In Thailand, the cost-effectiveness ratios of maintenance drug treatment for major depression are 38,000 baht per DALY and episodic drug treatment 42,000 baht per DALY (32,000-57,000) (Prukkanone et al., 2012). Therefore, depression is a national economic costs crisis; the socioeconomic cost of depression reoccurs every year and very high cost for the foreseeable future.

Adolescent depression is serious and chronic illness that is significant negative impact on individual, family and social level. It not only causes low functioning of individual, enforces family's suffering. In order to reduce the negative consequence of depression; the significant way is designed to minimize risk factors and strengthen protective factors associated with depression during young adolescence.

Factors Associated with Adolescent Depression

The risk and protective factors associated with adolescent depression are classified into three aspects namely: biological, psychosocial, and sociological aspects. Prevention intervention is hoped that by enhance protective factors and reducing risk factors. The detail of three aspects with the risk and the protective factors are explained as follows.

Biological Aspect

A crucial predisposition to develop adolescent depression has been associated with neurotransmitter imbalance has been established, but contributors to the adolescent rise in risk (Maughan et al., 2013). Literature reviews of the biological aspect of depression demonstrated the risk and protective factors are explained as follows:

Biological risk factors associated with depression: a genetic history of depression is the strong risk factors associated depression, which is a familial transmission involves heritable processes (Chen, Hamilton, & Gotlib, 2010; Maughan et al., 2013). A crucial predisposition to develop adolescent depression has been associated with brain function and neurological risk factor that may have been passed on from first-degree biological relatives of persons with depression to offspring since in-vitro or prenatal (Schimelpfening, 2012). A child's exposure to episodes of maternal depression makes depression more likely for them (Leighton, 2006; WHO, 2008). Additionally, co-morbid depression in youths with ADHD results from genetic factors (Daviss, 2008). Including, a chronic physical illness such as diabetes can result into neurochemistry-hormonal imbalance and put children at risk for depression (Birmaher et al., 2009; Palazidou, 2012). The period after childbirth can be a vulnerable time due to hormonal imbalance. Studies of maternal depression have been shown to be associated with increased rates of emotional and deficits in cognitive functioning from infancy through adolescence (Langone & Glickman, 2003). Neurochemistry-hormonal imbalance can cause depression during the premenstrual and menstrual cycle phase (Botha, 2012). A result of gonadal hormones and estrogen changes during puberty are associated as potentiating effects on the central nervous system that is related to mood disturbances (Palazidou, 2012). Therefore, adolescent depression has been associated with brain function and neurochemistry-hormonal imbalance.

Biological protective factors associated with depression: healthy child growth is protective factor which requires nutritional support and hormone balancing. Amino acids offer nutritional support of the neurotransmitters that are essential for repairing brain damage and assisting with immune and endocrine system (WHO, 2008). Additionally, hormonal balancing during puberty is crucial, especially in girls. A menstrual health education can empower a girl and their mother to understand the

menstrual cycle and hormone change and explore hormone imbalance to prevent depression occurring during the premenstrual and menstrual cycle phase. Mothers should have education on nutritional support and given menstrual health information to daughter (Botha, 2012; Maughan et al., 2013). There is biological risk and protective factors associated with depression. However, familial transmission involves both psychosocial and heritable processes combine to influence risk.

Psychological Aspect

A psychological aspect includes an individual's cognitive interpretation influence development of individual's characteristics, self-esteem, and resilience that can have an influence on adolescent depression. Literature reviews of the psychological aspect of depression demonstrated the risk and protective factors are explained as follows:

Psychological risk factors: evidence illustrates that adolescent that have a pessimistic view of life or inadequate cognitive interpretation may be more vulnerable to the development of depression (Sarkohi, 2011; Starr & Davila, 2009). Adolescent with depression can be related to negative self-evaluation, which can be associated with low self-esteem as a risk factor depression. Most adolescents are concerned with self-image, particularly body appearance, which can influence an individual's self-concept in the crucial time for self-identity developed (Starr & Davila, 2009). They are full of self-blame and self-devalue; some experience consequence of self-objectification, shame, anxiety associated with self-image, decreased mental performance and risk to depression (Grabe, Hyde, & Lindberg, 2007; Starr & Davila, 2009). It is possible that an adolescent's self-perception can affect their self-interpretation into negative self-concept. This can also affect the level of adolescent's self-esteem due to the chronic feeling that others are critically aware of them.

The authoritarian parenting style is not adjusted to the adolescent's need for autonomy and consequence is associated with lowered self-esteem and self-consciousness. This influences an individual's way of thinking to be pessimistic, that can suppress and leave adolescent vulnerable to develop depression (Eccles, 2010). Obviously, the evidences supporting low self-esteem as a risk factor associated with depression in adolescence. A study on adolescent depression indicated that low self-

esteem had a significant negative direct effect on adolescent depressive symptoms (-.601; $p < .01$) (Vongsirimas, Sitthimongkol, Beeber, Wiratchai, & Sangon, 2009). A prospective study of Thai adolescent mothers with depression, found low self-esteem and a lack of social support as risk factors of depression (Nirattharadorn, Phancharoenworakul, Gennaro, Vorapongsathorn, & Sitthimongkol, 2005). As the result of study on the effects of an empowerment program on adolescents' self-esteem and depression showed that the program could be used as a guideline for promote self-esteem and reduce depression in Thai adolescents. Additionally, several studies on child and adolescent depression-related variables indicate that low self-related school competence, and low academic future goals lead to low self-esteem (Glanz, Rimer, Viswanath, 2008; Ruangkanchanasetr, Plitponkarnpim, Hetrakul, & Kongsakon2005). Therefore, low self-esteem can play a mediating role as risk factor of depression in adolescents.

Psychological protective factors: the personal characteristics of a child such as an easygoing temperament, optimistic mature, and resilience will make them less vulnerable (Clark, 2007; Onunaku, 2005). Particularly resilience act as the key protective roles against depression in adolescence (Breton et al., 2015). Several studies illustrated that resilience is a crucial factor associated with depression (Breton et al., 2015; Clark, 2007). Resilient adolescents had higher self-esteem and they also had higher scores on problem solving strategies than vulnerable adolescents. Resilience makes the children more likely to have developed strategies to cope successfully with negative life circumstances (Breton et al., 2015). Social factors such as stressful life events, family psychiatric problems and inadequate upbringing can influence parent–child conflict that involves children's psychological development processes, associated with depression.

Sociological Aspect

Sociological aspect is an essential protective factor to buffer depression. Childhood experiences that lack appropriate sociological support may have a higher risk for the development of depression in adolescence. The sociological aspect of depression demonstrated the risk and protective factors are explained as follows:

Sociological risk factors: stressful lives experience that impacts psychosocial development. Several studies demonstrated that vulnerable adolescents who had exposed to stressful circumstances such as a parent's psychiatric problem, substance abuse, maternal depression, losing a parent, lack of social support (Langone & Glickman, 2003) are more likely to develop depression during the child and adolescent transition period (Glaring Facts, 2011; Ruangkanchanasetr et al., 2005; Schimelpfening, 2012; Thiamkaew, Phuaphanprasert, Mahatnirunkul, & Pannarunothai 2007; Zisook et al., 2007). The key to most of these risks reside in specific characteristics of the social stress environment such as inadequate upbringing or child maltreatment based on serious family disruptions, the loss of a parent because of death or divorce (WHO, 2008), serious interpersonal conflicts, violence in the family, parental rejection, and negative parental rearing style, and lack of safe schools (National Academy of Sciences, National Academy of Engineering, Institute of Medicine, & National Research Council, 2009).

The stressful experiences can lead to emotional imbalance such as anxiety, and feeling alienated from parents is featured as the primary sources of depression (APA, 2013; Ruangkanchanasetr et al., 2005; Thiamkaew et al., 2007). The behavioral theories view, these stressful life events may be an environment stimulus that makes them have depleted social resources, contribute to helplessness and hopelessness; including interpersonal theories view social relationships, context and socio-environmental conditions as critical features of vulnerability to development of depression (Schimelpfening, 2012; Zisook et al., 2007).

Therefore, stressful situations within the family, school and society can influence the development of depression in adolescence. Vulnerable children who cope with the stressful life events experiences are sociological risk factors may lead to abnormalities in neurodevelopment related to depression during adolescence period.

Sociological protective factors: social support especially supportive parenting is a crucial buffer for depression in adolescents. Perceiving low satisfaction with social support and conflict with parents are associated with depression (Ruangkanchanasetr et al., 2005). Therefore, sufficient warmth and supportive parenting is a necessary factor for reducing the development to depression among adolescents (Brennan, Le Brocque,

& Hammen, 2003). Supportive parenting associated with children's cognitive and emotional development. As previously mentioned, it could decrease the risk to develop depression in adolescents, in order that it may be a positive reinforcement (Bhatia & Bhatia, 2007; March et al., Fairbank, 2008).

Additionally, a secure or harmonious relationship between child and mother encourages the child's social growth, the mother learns to respect the child's growing autonomy, sets limits and recognizes the importance of consistency provides a less critical environment, encourages sustained attention to an activity and peer interactions. Additionally, depression prevention may be enhancing parenting attachment, harmonious relationship, and supportive parenting. Including, less conflict, positive family life and environment, sufficient economic resources, as well as functioning father for promoting the protective factors involved in the child's psychosocial development (NIMH, 2007). These will be reinforcements in the development of resilience which is related to a child's personal characteristics.

Enhancing protective factors such as healthy child growth, child resilience, and social support; and also reducing risk factors such as neurochemistry-hormonal imbalance, child vulnerability, and stressful life events may prevent depression in adolescents.

Depression Prevention in Adolescents

Depression prevention in adolescents refers to the interventions implemented during the adolescents' transition in vulnerable adolescents, who have manifestation of risk for depression where the interventions could occur prior to the initial onset of a clinically diagnosable disorder. The prevention emphasizes risk reduction and enhances protective factors that exist in the individual, family, school and society for reducing the occurrence the onset of new cases of depression.

The two main approaches to prevention are explained as selective and universal prevention (Renner, Lobbestael, Peeters, Arntz, & Huibers, 2012). Selective prevention is employed for target at-risk adolescents for a certain disorder, such as adolescents with subclinical depression. The most compelling risk factor for adolescent depression is the

presence of a depressive disorder in parents (Gladstone et al., 2011; Renner et al., 2012). However, selective prevention intervention may limit the generalizability of the results. This approach may lead to labeling of adolescents as at risk; they may fear of stigmatization. On the other hand, the universal prevention approach is based on assumption that all adolescents are exposed to factors that may represent risk.

Thus, the interventions are applied to a general population, regardless of individual risk in school, home and neighborhood, in which a great number of adolescents may be reached (Renner et al., 2012). This approach is a belief that depression exist on a continuum from subclinical levels of depressive state to depressive disorders. Therefore, the goal of universal prevention is typically to reduce the experience of depressive symptoms; not to reduce the number of depressive disorder in population.

In addition, the prevention is designed to maintain low levels of the relative condition of depression control, reduces the risk factors and enhances protective factors associated with depression during the adolescents' transition (WHO, 2008). However, adolescent depression is a complex bio-psycho-social cause, therefore, prevention intervention will need to add more elements in order to achieve socially useful and sustainable outcomes (Renner et al., 2012; WHO, 2008). It will increasingly need to rely on more social interventions that involve multidisciplinary social agents, implementation across community settings, and producing the intervention longer (Gladstone et al., 2011; Renner et al., 2012). Furthermore, evidence of depression prevention interventions in adolescent has found the interaction approaches to individual, family, and community or school based interventions, as follows:

Individual Level

Most depression prevention programs aim to enhancing the individual's psychological well-being (National Academy of Sciences et al., 2009) by conducted the intervention at individual level, in order to develop meaningful self-perception and personality, such as optimism, positive thinking, self-esteem, and self-efficacy intervention aiming at resilience (Nauta et al., 2012). As a meta-analytical review conducted on the effects of depression prevention programs for youth found that larger

effects emerged for programs targeting high-risk individuals. The content of all interventions emphasized on changing individual's cognition, behavior and developing the adolescent's skills, such as problem solving and coping skills (Stice et al., 2007).

Therefore, the crucial skills training may protect adolescents against stressful life events. The strength of these prevention programs produced significant reductions in depressive symptoms reductions in risk factors and protective factors enhancement for future depressive disorder onset. However, the intervention at an individual level still has its limitation. The depression prevention should consider the family cooperation to increase strengthening families by teaching effective parenting skills, enhancing family relationships, and support their children (National Academy of Sciences et al., 2009; Nauta et al., 2012; Stice et al., 2007). That may provide a valuable way to prevent depression in Thai adolescents.

Family Level

Depression prevention programs at the family level are developed based on believes that the family domain is the greatest factors associated with adolescent depression (Bond, Toumbourou, Thomas, Catalano, & Patton, 2005). The depression prevention program at family level focuses on protective factor enhancement, such as increasing supportive parenting skills, strengthening families by teaching effective parenting skills, decreasing family conflict and enhancing parenting attachment, and family relationships, improving confidence, interpersonal, social communication skills, supporting children encountering stresses, and improving occupational functioning (AHTA, 2010; Merry & Spence, 2007; National Academy of Sciences et al., 2009).

The strength of these prevention interventions are enhancement of adolescent's protective factors and which in turn reduce the child's risks. As, youth departments suggest that preventive intervention should consider the family as a whole, and have more cooperation between the youth and their family (Nauta et al., 2012; Stice et al., 2009). For example, depression prevention at a home-based family counseling program or parental involving can have a reduction of internalizing problems related adolescents depression (AHTA, 2010). The limitation of the depression prevention interventions involve parents can be difficult to get parents to attend the program (Merry & Spence,

2007). The participants may lack the motivation or adherence to attend and may be susceptible to stigmatization and they may have difficulty accepting it (Van Voorhees et al., 2005). Thus, using only these approaches may be limited; using with the other strategies may be needed to develop.

In Thailand, adolescents usually live with their parents and/or extended family; they are used to living with many people around them, especially with many generations of the same family living in one house. Parents usually have a close relationship with their child and spend a lot of time caring for their child in preadolescent period. They can provide a stable environment during upbringing and protection for adolescents (Charoenthaweesub, 2011); children can learn codes of behavior and emotions (Srivichit, 2007). The depression prevention by the family fully cooperate with intervention may be feasible to prevent depression in Thai adolescents for long term success. Nevertheless, studies on depression prevention for Thai adolescents at the family level are distinctly lacking.

Community Level

Most community based depression prevention is conducted with school-based interventions provided for children in the community. The intervention is aimed at improving cognitive processes and behaviors, in order to offer cognitive training, support to the children encountering serious stresses (WHO, 2008), modifying the school environment in order to promote developing students' coping skills (Renner et al., 2012), problem solving, decision making, and self-awareness, motivation, curiosity, social abilities in schools and community (Van Voorhees et al., 2005; Weissman et al., 2005). For instance, of the strength of depression prevention programs at community level such as the "Op Volle Kracht" (OVK) program delivered by school teachers is a structural implementation of the program in the school curriculum with practical implementation. This program was provided knowledge regarding depression prevention to Dutch adolescents with a high risk of developing depressive symptoms. Additionally, the Penn Resiliency Program (PRP), which is a theory-based universal school-based program, was designed for early adolescents (ages 10-14 years) (Kindt et al., 2012; Tak et al., 2012). These knowledges may aid towards the improvement of universal depression prevention in general.

A structural implementation of the program in the school curriculum had several limitations. Using a school based design, probably primarily only motivated schools to join in the intervention. Also, teachers need to be intensively trained (Stice et al., 2007; Vuthiarpa et al., 2013). They are more likely to generalize their skills and knowledge to other parts of the curriculum. The programs delivered by professional interventionists produced a larger effect than those provided by school staff; they are expected to be more sensitive to signals of students with subclinical symptoms of depression and professional help could be consulted much earlier (Merry & Spence, 2007; Stice, Shaw, & Marti, 2007).

The intervention need to developed methods to effectively train teachers across large geographical regions to deliver new interventions. Additionally, it can be difficult to engage adolescents with prevention program and a lot of time is required to implement policy and practice changes at whole-school levels. According to a meta-analytical review, which summarized the effects of 32 depression preventions programs developed for high risk adolescents; the review suggested that depression prevention efforts should produce programs with a shorter duration. This may be because school staffs are not able to devote as much time to providing interventions due to classroom responsibilities (Merry & Spence, 2007; Stice et al., 2007). The results draw attention to the difficulties faced when implementing large-scale, school-based, universal preventive interventions (Sawyer et al., 2010). Thus, the prevention at individual, family and school or community level is successful in enhancing protective factors and strengthening teachers and parental skills to prevent depression in adolescents.

However, the limitations of motivating adolescents, families, and teachers participate in the depression preventive interventions. Additionally, they need to participate in intensive training programs which aim at enhancing their skills.

In summary, the depression prevention in adolescents at the school levels and the outcomes of intervention did not differ significantly. There are several limitations of using a school based design, probably primarily motivated schools will join in the intervention and teachers need to be intensively trained and new skills and knowledge are required in order to gain relevant knowledge in the intervention. School staffs are not able to devote as much time to providing interventions that have a long duration.

Also, depression prevention in adolescents at the family levels, the difficulty of engaging adolescents and parents to attend the program and the long time period required to implement, the skills training given to the adolescents may be insufficient to protect them against the stressful life events.

Theoretical Perspective Approach to Depression Prevention in Adolescents

The literature illustrates approaches which can help explain the theory application regarding the evidence of depression prevention among adolescents namely 1) Buddhist perspective, 2) cognitive theory, and 3) social cognitive theory.

Buddhist Perspectives

The Buddha's teachings of the Four Noble Truths that influence a person's view, affect their lifestyles and also cause suffering; the latter of which is a protective variable for depression prevention (March et al., 2008). The Four Noble Truths are 1) life means dukkha or suffering, 2) the origin or cause of dukkha is attachment, 3) The cessation of dukkha is attainable, and 4) the eightfold path or the middle way to the cessation of dukkha. Buddhist perspectives may be usefully for people are overwhelmed with suffering (Bhikkhu Payutto, 2007).

The path to transcendent happiness starts from an understanding of the suffering and the root causes of suffering. The human life nature inevitably has unable to avoid dukkha or suffering. When we are separated from the people we love; contact with people we dislike and the frustration of desires such as birth, old age, sickness, and death; as a result we will have personal reaction to the inevitable pain of life to endure suffering or mental dysfunction like grief, sadness, depression, fear, anger, and frustration (Bhikkhu Payutto, 2007).

The causes of suffering include jealousy, anxiety, hatred, addiction, possessiveness and shamelessness (Ajahn Jayasaro, 2013). Based on this perspective, the main cause of depression is an underlying egotism. An unexpected result of an underlying focus on the ego or selfishness or even self-cherishing can be a sense of dissatisfaction with oneself that may lead to worthlessness and low self-esteem (Piet & Hougaard, 2011; Wallace, 2012). Great ego is a very self-centered fascination that can put an individual

at risk for depression. The self 'I' can lead to unwanted suffering, which can be considered very self-absorbed; self-centered fascination and trapped in their own self that can be the cause of depression (Thich Nhat Hanh, 2012).

Actually, both the nature of suffering and the opposite of suffering or happiness are subject to impermanent. This means people are never able to have and /or keep permanently happy moments. The suffering cessation are attainable through proper knowledge and practice of the Noble Eightfold Path includes 1) right view, 2) right intention, 3) right speech, 4) right action, 5) right livelihood, 6) right effort, 7) right mindfulness, and 8) right concentration. This practice involves every aspect of lives to help people freedom from suffering, let go individual's reactions, fear, grasping.

Following the middle path people establish integrity, learn how to gain peace of mind and see with wisdom, and see the right view to accept the fact that suffering is actually a fact of life (Ajahn Jayasaro, 2013). This way can help people find wakefulness and freedom in the midst of our joys and sorrows, neither grasping nor resisting life; leads to achieve transcendent happiness and peace of mind. Simply being a right intention, speech, and action with equanimity, genuinely loving, caring, respect, compassion and forgiveness not only for others, but for self as well, that is peace with suffering; likely an antidepressant (Piet & Hougaard, 2011; Wallace, 2012).

Depression prevention implementation use meditation practicing as the tool to train the mind not to reside in the past or the future, but to live in the here and now, which people can experience peace most readily. It could be the solution that transforms the mind from ignorance, attachment and self-cherishing into healthy, pure thoughts and happiness. Every breath, every step, can be filled with peace, calmness, and can find enlightenment; that is to be awake, alive in the present moment (Thich Nhat Hanh, 2012).

Studies of depression have shown that mindfulness programs can be effective in reducing the relapse rates and preventing the first episode of depression in high risk adolescents, such as Mindfulness-based Cognitive Therapy (MBCT) (Manicavasgar, Parker, & Perich, 2011). Therefore, researchers have tried to apply the cognitive theories and CBT with mindfulness (Felder, Dimidjian, & Segal, 2012). Several studies

give suggestion that future research on combining mindfulness and meditation to prevent the first episode of depression, should be conducted. As Rungreungkolkit, Chutungkorn, and Wongtaki (2006) have been able to develop the Buddhist Counseling Model for helping Thai clients with emotional problems base on a technical collaborative approach of action research. This model consisted of four phases during counseling which emphasized on educating about suffering based on the Buddhist principles of three Universal Natural Laws: suffering, impermanence, and no self, as well as meditation practice. Patients who received the Buddhist counseling are able to accept unpleasant situations calmly, anxiety and depression were reduced.

However, the effectiveness of Buddhist counseling for depression prevention intervention should have policy and appropriate supportive from the hospital, the therapist's training. Therefore, Buddhist perspective application should considerate these limitations that assure the client' belief in Buddhist principles and understanding Buddhist doctrine.

Cognitive Theory

Cognitive theory attempts to explain behavior by understanding the thought processes, based on the assumption that humans are logical beings. This theory emphasizes thoughts as a crucial determinate of individual's emotions and behavior (Beck, 2005). Beck who advocated the cognitive theory of depression, explained that depression was instituted by one's view of oneself, instead of one having a negative view of oneself due to depression. Negative automatic thought, biases and distortions generated by dysfunctional beliefs, were the cause of depressive symptoms (Allen, 2003; Fritscher, 2011). It is crucial to change an individual's thoughts in order to change his or her emotion and behaviors.

Individual's cognitive interpretation is influenced by the way an individual perceives self. If they have a negative view of the self, the world this can lead to negative self-concept; this will also affect to the level of an individual's self-esteem. Psychological mechanism can cause confusion about self-image, viewing self as ugly or unattractive, feeling of inadequacy, unimportant and worthlessness (Collins, 2012; NIMH, 2007). These feelings, through individual's self-perception, can result in low

self-esteem, which leads to depression. Cognitive therapy seems to help the individual to develop alternative or more balanced thoughts (Eisendrath, Chartier, & McLane, 2011).

Recently, cognitive theory has been merging with behavior theory into a comprehensive cognitive-behavior therapy (CBT), which is the most popular method of therapy for helping individuals with psychiatric problems, especially, depression, anxiety, and other physical ailments (Eisendrath et al., 2011; NIMH, 2007). This program can also help to enhance the level of individual's self-esteem and reduce depression symptoms. Additionally, reinforcement is seen as a more effective technique and also stops techniques used to stop automatic thoughts and replace with new thoughts (NIMH, 2007). Several studies have indicated that CBT is also effective when provided specifically to adolescents at risk to modify their thinking into a realistic way and change behaviors accordingly.

Although CBT is currently only sporadically available in Thailand, but this intervention is not part of psychology or psychiatry training programs. There also is a lack of mental health personnel, particularly psychiatrist and psychologist, who would be expected to deliver CBT in Thailand. It may be more feasible and would be less costly to train psychiatric nurses as CBT therapist rather than psychiatrist or psychologists (Prukkanone et al., 2012). Almost of depression prevention interventions based on CBT program requires health care professional such as psychiatrists and psychiatric nurses who are expert in the CBT program and need training (Min et al., 2013; Vuthiarpa et al., 2013).

Even though this study indicated that the effectiveness of a school-based CBT program, but a program requires nurses with CBT knowledge and experience. It has limitations due to some of adolescent participants may not have been interested in joining activities; comfortable being in a group; and allowed by their parents to participate. The participants expressed a need for their parents to better understand their depression and the CBT program (Vuthiarpa et al., 2013). Further, majority of depression prevention based on CBT, were developed in a western culture (Prukkanone et al., 2012).

Therefore, cognitive and behavioral theory application for depression prevention intervention should considerate the limitations and Thai context, although it can change an individual's thoughts and replace with new thoughts to enhance the level of self-esteem and reduce depression symptoms.

Social Cognitive Theory

Social cognitive theory (SCT) has been used for depression prevention intervention. SCT emphasizes the dynamism in the interactions between the individual and the environment (Barbaranelli, Carprara, & Pastorelli, 1996). Explanation of human behavior based on SCT, behavior is not only a result of personal factors, but also learning through observing the model or others or environment. Based on SCT, depressed people's personal factors (self-concepts) are different from non-depressed people. Depressed people believe that they have no influence over their situation and tend to hold themselves solely responsible for bad situation in their lives and are full of self-recrimination and self-blame. They also have a flawed judgmental process tend to set their personal goals too high, and then fall short of reaching them. Repeated failure further reduces feelings of self-efficacy and leads to depression (Glanz et al., 2008). Life events may be a stimulus that depletes social resources, contribute to helplessness and hopelessness, which increases vulnerability to depression. Modeling or observational learning among others that provide resources to buffer or cope with stressful life event is one important risk factor associated with depression in adolescents. Therefore, social cognitive theory application can enhance effective coping skills as a protective factor for depression prevention intervention by learning through environment or model.

Adolescent's Cognitive Psychosocial Development and Depression Prevention

An understanding of adolescent development can help us identify deviations in adolescent growth and development processes and can be beneficial in designing appropriately prevention (Eccles, 2010). The psychosocial theory and cognitive development of child and adolescent provides considerable insight into the adolescent's struggle to attain adulthood. According to psychosexual theory, Sigmund Freud highlighted the role that family relations play in child development. If parents find an appropriate balance, then children grow into well-adjusted adults with the capacity for

mature sexual behavior, investment in family life, and rearing of the next generation. Erik Erikson's psychosocial theory emphasizes the role of social processes and asserts that the ego is a positive force in development. Each stage of development, the ego acquires attitudes and skills that make the individual an active contributing member of society.

How a child resolves psychosocial conflict such as strivings for industry versus feelings of inferiority along a positive or negative continuum, determines his or her adjustment (Johnson, Mohr, & Cronin, 2003). Inferiority feeling results from negative experience can entail a preoccupation with self-image. Identity diffusion may lead to role confusion in adulthood. Children who are unable to pass the tasks of basic psychosocial development; the adverse consequent is the feeling all or each of mistrust, shame, guilty, inferiority, identity diffusion. For those who may be fragile or at risk, this could develop depression. Piaget's theory of cognitive development states that children move through four stages. They construct knowledge activities as they manipulate and explore their worlds by beginning with the infant's sensorimotor activity and ending with adolescent's elaborate, abstract reasoning system. In children age between 7 and 11 years, rational thinking becomes logical, and then abstract thinking begins rational in the real world in adolescence (Eccles, 2010). Importantly, children are active constructive beings; thus, they acquire culturally relevant knowledge and skills gradually through cooperative dialogues with mature members of society (Johnson et al., 2003).

Cognitive changes during early adolescence development relate to the increasing capacity for abstract thought, considering the hypothetical, the real, and multiple dimensions of a problem. The cognitive changes can affect children's self-concepts, thoughts about their understanding of the internal psychological characteristics of others that increasingly base their friendships. In the early adolescence period, individuals are at risk for psychological problems such lowered self-esteem due to coping with the stresses of combination of many pubertal change, the dynamics of dating occurring simultaneously early sexual activity, eating disorders increase in prevalence, and the incidence of suicides rises (Eccles, 2010; WHO, 2013). This period is a crucial time for cognitive development and having a desire to gain new knowledge, which is mediated

socially and supported by adults. Distancing in parent-adolescent relations has a functional value for adolescents in that it fosters their independence and develops sense of efficacy (Brock & Kochanska, 2015). These problems are sufficient evidence to raise alarm for prevention in early-adolescent period.

Psychosocial development, cognitive learning approach, prior knowledge and emotional state are taken into consideration as variables that have a significant impact on the health behavior learning. Hypermedia environments also need to be taken into consideration and interactions within the context (Mourlas, Tsianos, & Germanakos, 2009). Most members of the Gen Z or the Internet Generation born in the 1990s have spent their entire lives with the Web (Deborah, 2012). Also some individuals count on the internet as their external brain, which has a continuous connection, is a quick-acting multi-tasker, but it also causes a loss of patience and a lack of ability for deep-thinking (Anderson, 2012; Ted, 2012). Furthermore, social media may provide a powerful influence on adolescent's cognition and behaviors, which affects the development of self-esteem, and resilience. Therefore, during the preadolescent period is an appropriate time to develop resilience, and crucial life skills in order to prevention before the onset of depression.

Conceptual Framework

Depression in Thai adolescent has a rising incidence that may be a predisposition to full depressive episodes in adulthood later in life. Although we have many existing depression prevention interventions but there does not emphasize practice by one's own and also have a shortage of the experts to conduct the interventions. Therefore, the depression prevention model should be developed by adolescents and increasingly their parents, teachers, and peers involved. It may be sustainability and providing opportunities to enhance adolescent's ability to depression prevention by themselves. The critical theory attempts to fuse theory and action with the implicit goal of the self-reflective and emancipatory function of knowledge that is able to clarify the understanding of the real problem and conduct the knowledge to outfit with the reality world. This approach will increasingly become more sophisticated and draw on transdisciplinary theoretical resources, multiple methods that allow participants to gain insight into the formation and transformation of their practices in context.

Underpinning the critical theory support Participatory Action Research (PAR) is a genuine, non-coercive process whereby liberating and acknowledging people's equality of worth and providing freedom from the conditions (Kemmis & McTaggart, 2007). Thus, the development of depression prevention model is needed to listen to adolescent, parents, and teacher views. The implicit goal of the emancipatory function of depression prevention knowledge under understanding of social needs and continual learning with the resources available is necessary. The PAR approach is deliberately and systematically reflexive, that researchers embarked on a process of transforming themselves and their research practices to change community development practices through flexible methods, transformative purposes, iterative and collaborative processes of communication and learning.

The PAR approach can create people's networks of openly rational debate communication and acting in the ways, which are guided by adolescent, parents and teachers perspectives to shared particular goals, reached the consensus and framed their thinking for cooperative development of the appropriate model of depression prevention for Thai adolescents. The adolescents, parents, and teachers participate to develop the depression prevention model involved a spiral of self-reflective cycles of the PAR process. A new cycle was conducted again and until the identified problems had been resolved leading to the reframing of a new knowledge of depression prevention model could be practical design and sustainability for depression prevention implementing for adolescents.